

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

REMARKS/ARGUMENTS

Favorable reconsideration of the above-identified patent application, in light of the above amendments and the following remarks is respectfully requested. The presently pending claims are claims 13 and 14. Claims 1-12 have been canceled. Claims 13 and 14 have been added.

In response to a telephonic interview with the Examiner, claims 1-12 have been canceled. The Applicant has added claims 13 and 14 to claim the novel aspects of the Applicant's invention (postage stamp incorporated with a sterilization indicator) while avoiding problems with rejections under MPEP 706.03(a).

Upon review of MPEP 706.03(a), there are three cases are cited: *In re Miller*, 418 F.2d 1392, 164 USPQ 46 (CCPA 1969); *Ex parte Gwinn*, 112 USPQ 439 (Bd. App. 1955); and *In re Jones*, 373 F.2d 1007, 153 USPQ 77 (CCPA 1967). As discussed in the telephonic interview, the Applicant is attaching excerpts from a treatise entitled "Patent Prosecution- Practice and Procedure Before the U.S. Patent Office" by Irah H. Donner.

In re Miller held that patentability of an invention may be based on printed matter when there is a functional relationship between the printed matter and a substrate, such as a cup. In the Applicant's invention, there is a functional relationship between the stamp and the mail article. The stamp provides the dual purpose of providing an indicator of completion of the sterilization process as well as an indicator that postage has been paid for delivery of the mail article. The Applicant's invention uniquely provides a sterilization indicator incorporated with the postage stamp, thereby removing the necessity to add additional tags, labels or indicating devices to the envelop. This reduces costs associated with adding additional indicators to the mail article. In addition, surface

area for placement of indicators may be limited on the mailing article, such as an envelope. Rather than adding two indicators on the limited surface area, one for the stamp and one for the sterilization indicator, the present invention incorporates both in one stamp.

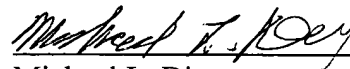
In re Miller was also cited in *In re Levin*, Civ. App. 96-1180 (Fed. Circ. Feb.. 3, 1997) (unpublished). In *Levin*, the Federal Circuit held that color-coded expiration indicia provided a sufficient functional relationship with the substrate or bottle and/or what was contained in the substrate or bottle. Claim 14 is drafted in a similar fashion as the claim discussed in *Levin*.

It should be noted that the MPEP 706.03(a) discusses that “a mere arrangement of printed matter” is rejected as not being within the statutory classes. However, the Applicant’s invention is not a mere arrangement of printed matter. Printed matter is but one component of the elements of the Applicant’s invention. MPEP 706.03(a) is directed at inventions which merely provide printed matter. The Applicant’s invention, on the other hand, includes several functional elements. Thus, the use of printed material in combination with other elements is patentable.

CONCLUSION

For all the above reasons, the Applicant respectfully requests the reconsideration and the allowance of claims 13 and 14.

Respectfully submitted,



Michael L. Diaz

Registration No. 40,588

Dated: 3-15-04

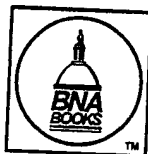
Michael L. Diaz, P.C.
555 Republic Drive, Suite 200
Plano, Texas 75074
(972) 578-5669

Patent Prosecution

Practice & Procedure
Before the U.S. Patent Office

Second Edition

Irah H. Donner



The Bureau of National Affairs, Inc., Washington, D.C.

Credit System, the plaintiff obtained a patent on a means of insuring merchants against bad-debt losses. The Second Circuit held that the patent was invalid because only the printed matter was different from the prior art:

The three claims of the patent are concerned solely with the providing of sheets with appropriate headings, adapted to be used in preparing historical records of certain business transactions. There is nothing peculiar or novel in preparing a sheet of paper with headings generally appropriate to classes of facts to be recorded, and whatever peculiarity there may be about the headings in this case is a peculiarity resulting from the transactions themselves. . . . Given a series of transactions, there is no patentable novelty in recording them, where, as in this case, such record consists simply in setting down some of their details in an order or sequence common to each record.¹⁷³

The basic criteria used to determine whether an invention or claim recites unpatentable printed matter appear to be the same. For example, an early holding regarding an invention that constitutes printed matter was set forth in *In re Reeves*,¹⁷⁴ in which the CCPA stated that "[i]t seems to be settled patent law that invention cannot rest alone in novel printing arrangement."¹⁷⁵ Similarly, as stated above in *In re Russell*, "[t]he mere arrangement of printed matter on a sheet or sheets of paper, in book form or otherwise, does not constitute 'any new and useful art, machine, manufacture or composition of matter'"¹⁷⁶

The definition of what constitutes printed matter seems fairly straightforward. But what about the reverse—what is the test for determining when an invention is not considered printed matter, and therefore is patentable in the United States? The courts have struggled over the years to articulate a clear and workable test to determine what is not considered printed matter.

B. Determining the Line Between Patentable and Unpatentable Inventions Related to Printed Matter

As stated previously, providing a test of what constitutes printed matter is relatively easy; that is, printed matter is generally defined as merely an arrangement of characters on a piece of paper. The specific standard for determining what is *not* printed matter is much more difficult to articulate. As a result, the definition for what is not considered printed matter has evolved over the years.

An early decision holding that an invention was not printed matter was *Flood v. Coe*.¹⁷⁷ In *Flood*, the invention involved a price ticket

¹⁷³*Id.* at 143.

¹⁷⁴*In re Reeves*, 62 F.2d 199, 16 USPQ 110 (C.C.P.A. 1932).

¹⁷⁵*Id.* at 199–200, 16 USPQ at 111.

¹⁷⁶*In re Russell*, 48 F.2d 668, 9 USPQ 181, 182 (C.C.P.A. 1931).

¹⁷⁷*Flood v. Coe*, 45 USPQ 72 (D.D.C. 1940). See more detailed discussion in *infra* §III.D.3.

for tagging garments in retail stores. The ticket was formed in two parts with a perforated line between them. Each part of the ticket carried an identical series of identification indicia and a price mark. When a garment was sold, one part of the ticket was torn off and retained by the store while the other part was left attached to the garment taken by the customer.

The applicant Flood's ticket differed from the prior art in that the line of perforations extended across the length of the ticket instead of across the width. In addition, the price marks on Flood's ticket were arranged differently. The District Court for the District of Columbia held that the ticket was not considered printed matter that was excluded from patent protection:

The invention here is more than an arrangement of printed matter on a piece of paper. There is a definite and decided relationship between the physical structure and the printed matter. The one depends upon the other. In other words, there is cooperative relationship between the printed indicia and the structural features of the ticket.¹⁷⁸

Thus, *Flood* recognized that some inventions related to printed matter are not excluded from patent protection, particularly when there is a "cooperative relationship" between the printed matter and the structural aspects of the invention. *Flood*, however, did not clearly describe what constitutes a cooperative relationship.

The Board attempted to clarify the rules relating to printed matter in *Ex parte Gwinn*.¹⁷⁹ The invention in *Gwinn* involved a set of dice for use in a parlor golf game. Each die represented a type of stroke (tee, fairway, putt, etc.) with printed surfaces indicating different numbers of strokes for stroke type. After reviewing the various decisions on printed matter, the Board summarized the basic holdings:

(A) that where the sole distinction set out in the claims over the prior art is in the printed matter, there being no new feature of physical structure and no new relation of printed matter to physical structure, such claims may not be allowed; with the further holding (B) that it is only where the claims define either new features of structure or new relations of printed matter to structure, or both, which new features or new relations give rise to some new and useful function or effect or result that claims may properly be allowed.¹⁸⁰

The Board further summarized these rules in *Ex parte Stange*.¹⁸¹


As we understand the decisions, they hold as follows: when printed matter is involved, a combination including printed matter associated with structure is capable of being patented—


¹⁷⁸ *Id.* at 73.

¹⁷⁹ *Ex parte Gwinn*, 112 USPQ 439 (Pat. Off. Bd. App. 1955). See more detailed discussion in *infra* §III.C.8.

¹⁸⁰ *Id.* at 446.

¹⁸¹ *Ex parte Stange*, 124 USPQ 238 (Pat. Off. Bd. App. 1958). See more detailed discussion in *infra* §III.D.5.

- 
1. If there is any novel physical feature of structure even though the relationship of printed matter thereto may be old;
 2. If, in the combination in which the physical features of structure are old, there is a new relation of printed matter thereto; or
 3. If, in the combination, there are both new physical features of structure and a new relation of printed matter thereto.¹⁸²




The scope of the printed matter doctrine was severely limited by *In re Jones*.¹⁸³ *Jones* involved a disc encoder with patterns of transparent and opaque areas printed thereon. The improved encoder contained new patterns that provided for more accurate measurements than the patterns used by the prior art. The CCPA held that the encoder was not printed matter and therefore was patentable:

That claim, and the others likewise, do not, in our opinion, define "printed matter" in the sense in which that term has heretofore been used to indicate various sorts of indicia whose *primary purpose is the conveying of intelligence to a reader*. What we find on the disc we would not characterize as indicia or printing but as structure. . . . A dark area on a light base can be an element of structure.¹⁸⁴

Thus, the CCPA defined printed matter as indicia whose primary purpose is the conveying of intelligence to a reader. Since the encoder's purpose was not to convey reading information, it was not considered printed matter.

In *In re Gulack*,¹⁸⁵ the CCPA further elaborated on the limits of printed matter, this time in connection with an obviousness rejection:

Where the printed matter is not functionally related to the substrate, the printed matter will not distinguish the invention from the prior art in terms of patentability. . . .



A functional relationship . . . to size or to type of substrate . . . or conveying information about substrate . . . is not required. What is required is the existence of *differences* between the appealed claims and the prior art sufficient to establish patentability. The bare presence or absence of a specific functional relationship, without further analysis, is not dispositive of obviousness. Rather, the critical question is whether there exists any new and unobvious functional relationship between the printed matter and the substrate.¹⁸⁶

The Federal Circuit has recently added that the printed matter doctrine should not be liberally used, particularly for computer-related inventions—in essence, confirming the narrow interpretation

¹⁸² *Id.* at 241.

¹⁸³ *In re Jones*, 373 F.2d 1007, 153 USPQ 77 (C.C.P.A. 1967). See more detailed discussion in *infra* §III.C.2.

¹⁸⁴ *Id.*, 153 USPQ at 80–81 (emphasis added).

¹⁸⁵ *In re Gulack*, 703 F.2d 1381, 217 USPQ 401 (Fed. Cir. 1983). See more detailed discussion in *infra* §III.D.8.

¹⁸⁶ *Id.*, 217 USPQ at 404 (footnotes omitted).

of the printed matter doctrine espoused in *Jones*. For example, in *In re Lowry*,¹⁸⁷ the Federal Circuit held as follows:

The printed matter cases have no factual relevance where "the invention as defined by the claims *requires* that the information be processed not by the mind but by a machine, the computer." Lowry's data structures, which according to Lowry greatly facilitate data management by data processing systems, are processed by a machine. Indeed, they are not accessible other than through sophisticated software systems. The printed matter cases have no factual relevance here.¹⁸⁸

In practice, the application of these rules to determine whether an invention related to printed matter is patentable is very difficult. As a result, no attempt has been made to legitimize the printed matter doctrine by formulating a *prima facie* case as has been done, for example, in connection with utility rejections.¹⁸⁹ Therefore, it is instructive to review different decisions relating to the printed matter doctrine. Because the courts have applied the doctrine in the two main areas of statutory subject matter rejections and prior art rejections, these topics will be discussed separately in the following subsections.

C. Cases Involving Statutory Subject Matter Rejections

1. Perforated Railway Ticket—Statutory Subject Matter

One of the earliest decisions relating to what types of printed matter are patentable subject matter under the patent laws is *Cincinnati Traction Co. v. Pope*.¹⁹⁰ In *Cincinnati Traction*, the invention related to a transfer ticket for street railways designed to prevent fraud by customers and conductors. The railway ticket comprised a body portion, a coupon, and a stub. It included conventional indications showing that the body alone was good at one time of the day, and that the body and the coupon were required for the other portion of the day. For example, a morning transfer was issued with the coupon detached, and presumably a conductor would have to account for all coupons so issued during the morning. An afternoon transfer was issued with the afternoon coupon attached. The afternoon coupon was detachably connected to the body portion, which was detachably connected to the stub, enabling the ready separation of the coupon from the body, as well as the body from the stub.

¹⁸⁷*In re Lowry*, 32 F.3d 1579, 32 USPQ 2d 1031 (Fed. Cir. 1994) (quoting *In re Berhart*, 417 F.2d 1395, 1399, 163 USPQ 611, 615 (C.C.P.A. 1969)). See more detailed discussion in *infra* §III.D.9.

¹⁸⁸*Id.*, 32 USPQ 2d at 1034.

¹⁸⁹See *supra* §II.A.

¹⁹⁰*Cincinnati Traction Co. v. Pope*, 210 F. 443 (6th Cir. 1913).

meat was cut in accordance with the markings. Nevertheless, the rejection of the claims was affirmed.

7. Checkbooks—Not Statutory Subject Matter

The invention in *In re Sterling*²¹⁵ related to inserting a bank savings check with its stub after a batch of regular checks, thereby providing a convenient arrangement for doing business. The claims were directed to "a sheet of paper" and a "check book having a plurality of stubs and checks detachably attached to said stubs."²¹⁶ The CCPA held that the claimed invention was directed to printed matter and did not fall within any of the statutory classes of invention under the patent laws:

[P]atentable novelty cannot be predicated upon printing alone but must reside in physical structure.

If the check and stub structure here involved presented some new and useful physical form with the printed matter adjusted to such form, as was the situation with reference to the transfer ticket [in the *Cincinnati Traction Co.*, 210 F. 443 (6th Cir. 1913), case], a different question would confront us in view of the doctrine of the [*Cincinnati Traction Co.* case²¹⁷

Thus, the CCPA held that a checkbook containing different inserts arranged in a specific manner was not statutory subject matter, reasoning that there was no new physical form in the checkbook or sheet of paper.

8. Dice Game—Not Statutory Subject Matter

In *Ex parte Gwinn*,²¹⁸ the invention involved a set of dice for use in a parlor golf game. Each die represented a type of stroke (tee, fairway, putt, etc.), with printed surfaces indicating different numbers of strokes for each type. The only indicia illustrated on the dice were either conventional indicia or blank faces. The invention was rejected as being unpatentable over the prior art as well as not being within the statutory classes of patentable subject matter. After reviewing the various decisions on printed matter, the Board summarized the basic holdings:

(A) that where the sole distinction set out in the claims over the prior art is in the printed matter, there being no new feature of physical structure and no new relation of printed matter to physical structure, such claims may not be allowed; with the further holding (B) that it is only where the claims define either new features of structure or new

²¹⁵ *In re Sterling*, 70 F.2d 910, 21 USPQ 519 (C.C.P.A. 1934).

²¹⁶ *Id.*, 21 USPQ at 520.

²¹⁷ *Id.* at 521-22.

²¹⁸ *Ex parte Gwinn*, 112 USPQ 439 (Pat. Off. Bd. App. 1955).

[relations of printed matter to structure, or both, which new features or new relations give rise to some new and useful function or effect or result that claims may properly be allowed.²¹⁹

From these rules, the Board held that "if the substance or language of that which is printed may not constitute patentable subject matter, the arbitrary meaning attributed to dots and blanks by the instant case may not do so."²²⁰ Thus, the Board held that the parlor golf dice game failed to recite statutory subject matter:

[T]he dice claimed have the same cubical structure as the art, the printed matter is in the same arrangement relative to the dice as is the printed matter of the art, and the dice are used in the same way, by rolling and reading the uppermost surfaces. The sole difference over the art is in the printed matter (indicia), and differences in substance, language or meaning of the same, whether generally accepted or arbitrary, as in the instant case, cannot serve to impart patentability.²²¹

Thus, *Gwinn* held that a dice game that used conventional dice with similar indicia as those on standard dice was not patentable subject matter. *Gwinn* also rejected the claimed invention based on the prior art, stating that "these two rejections are not separate rejections, but constitute different modes of expressing the same reasons for a holding of lack of patentability."²²²

9. Color-Coded Expiration Date—Statutory Subject Matter

The invention in *In re Levin*²²³ related to a color-coded expiration date on a medication bottle. Bruce Levin appealed decisions of the Board affirming an Examiner's rejections of claims 17 and 21 under 35 U.S.C. Section 101 as being directed to nonstatutory subject matter, that is, printed matter.

The two claims at issue involved methods for humans, by a quick visual inspection, to determine the expiration date of items using color codes to identify the year and intra-year time of expiration. Claim 17 at issue in this case was as follows:

17. The process of visually identifying to monitoring personnel by a human readable color code uniquely signifying the expiration date of an item having a limited life comprising the steps of:

- a. providing a container for the item;
- b. establishing a relationship between a first human distinguishable color and a year of expiration of the life of the item;
- c. establishing a relationship between a second human distinguishable color and an intra-year time period of expiration of the life of the item;

²¹⁹ *Id.* at 446.

²²⁰ *Id.*

²²¹ *Id.* at 447.

²²² *Id.* at 442.

²²³ *In re Levin*, Civ. App. 96-1180 (Fed. Cir. Feb. 3, 1997) (unpublished).

SIMILAR
to
APPLICANT'S
CLAIM
14

- d. establishing a first human visually distinguishable color zone which corresponds to the first human distinguishable color;
- e. establishing a second human visually distinguishable color zone which corresponds to the second human distinguishable color;
- f. establishing the first and second human visually distinguishable color zones on the container whereby a human can effectively determine the expiration date of the life of the item based only upon a quick visual inspection of the color coded zones.

The Board, in its initial decision and in its decision on reconsideration, maintained the rejection of claims 17 and 21 as being directed to printed matter. The Board maintained that no functional relationship as required by 35 U.S.C. Section 101 existed between the printed matter—the color-coding indicia—of the claims at issue and the item of attachment, such as a container or a pharmaceutical product. A functional relationship involving the conveyance of the expiration date of an item, the Board concluded, was not akin to the unique type of physical or volumetric relationship as found in the CCPA holding of *In re Miller*.²²⁴

On appeal, the Federal Circuit found that *In re Miller* was not limited to the specific combination of indicia on a measuring vessel indicating a volume ratio. The only requirement that 35 U.S.C. Section 101 imposes as set forth in *In re Miller* is that a new and unobvious functional relationship must exist between the claimed combination of printed matter and other claimed elements. The Federal Circuit held that the relationship between the expiration date indicia on the container or pharmaceutical product was a functional relationship. The color-coded expiration date indicia provided information about the substrate or what was contained in the substrate. As stated by the Federal Circuit:

We hold that the relationship between the expiration date indicia on the container or pharmaceutical product is a functional relationship. The color coded expiration date indicia provides information about the substrate or what is contained in the substrate.²²⁵

Thus, in *Levin*, the Federal Circuit held that color-coded expiration indicia provided a sufficient functional relationship with the substrate or bottle and/or what was contained in the substrate or bottle.

D. Cases Involving Prior Art Rejections

1. Meal Ticket—Patentable Over Prior Art

One of the earliest cases relating to the printed matter doctrine was *Benjamin Menu Card v. Rand, McNally & Co.*²²⁶ The invention

²²⁴ *In re Miller*, 418 F.2d 1392, 164 USPQ 46 (C.C.P.A. 1969).

²²⁵ *Levin*, slip op. at 4.

²²⁶ *Benjamin Menu Card v. Rand, McNally & Co.*, 210 F. 285 (N.D. Ill. 1894).

matter to first die, of printed matter to the eight dice, and printed matter on the first die to printed matter on the eight dice²³⁷

Thus, the Board reversed the Examiner and held the dice game to be patentable over the prior art, in part because of the printed matter on the nine dice.

6. *Measuring Cup—Patentable Over Prior Art*

In *In re Miller*,²³⁸ the invention involved a measuring cup designed to enable cooks to prepare fractional recipes without having to compute and measure out such quantities as 1/3 of 2/3 of a cup. A measuring cup was labeled "one-half recipe" and was also graduated or inscribed in the normal fashion of 1/4 cup, 1/3 cup, 1 cup, etc. A cook followed the graduated recipe numbers on the cup, resulting in one-half of the recipe. The Examiner rejected the claims as unpatentable, because there was not a sufficient cooperative relationship between the indicia and the cup (i.e., patentability over the prior art could not be based on the printed legends on the cup).

On appeal, the CCPA reversed. The court first stated as follows:

It seems to us that what is significant here is not structural but functional relationship and that it is of no moment with respect to measuring devices such as the spoons, where the volume is measured by filling the receptacle to its brim, which could also be true of a cup, in what position on or relation to the receptacle the indicia and legend being "attached to" the receptacle. Claim 13 specifies that the indicia and the legend are both "on" the "cup-shaped receptacle." This specifies the required functional relationship to carry out appellant's invention and clearly defines the disclosed invention as required by section 112.²³⁹

The CCPA then held the measuring cup patentable over the prior art:

[P]rinted matter, in an article of manufacture claim, can be given patentable weight. . . . The fact that printed matter by itself is not patentable subject matter, because nonstatutory, is no reason for ignoring it when the claim is directed to a combination. Here there is a new and unobvious functional relationship between a measuring receptacle, volumetric indicia thereon indicating volume in a certain ratio to actual volume, and a legend indicating the ratio, and in our judgment the appealed claims properly define this relationship.²⁴⁰

Thus, *Miller* held that patentability of an invention may be based on printed matter when there is a functional relationship between the printed matter and the substrate, such as a cup.

²³⁷ *Id.* at 241.

²³⁸ *In re Miller*, 418 F.2d 1392, 164 USPQ 46 (C.C.P.A. 1969).

²³⁹ *Id.*, 164 USPQ at 48.

²⁴⁰ *Id.* at 49.

7. Answer Sheet—Patentable Over Prior Art

In *In re Royka*,²⁴¹ the invention involved an answer sheet with response areas having permanent and nonpermanent information answers. The student selected one of the answers and applied an eraser to all the answers, permanent and nonpermanent. The permanent answer remained, indicating whether the student chose the correct answer. The claim recited a device that included "a support having response areas," "permanent printing," and "removable printing."²⁴²

The Patent Office rejected the invention as not being novel and as being only "a printed matter variation of the design" of the prior art.²⁴³ The CCPA reversed the rejection and stated that "[p]rinted matter may very well constitute structural limitations upon which patentability can be predicated."²⁴⁴ Thus, the CCPA held that a sheet of paper with removable and permanent indicia was patentable over the prior art.

8. Imprinted Band—Patentable Over Prior Art

The invention in *In re Gulack*²⁴⁵ related to a band that displayed a series of digits derived from a mathematical algorithm. The band served two functions: (1) it supported the digits, and (2) it presented the digits as an endless sequence without a recognizable beginning or end. The band could be placed on a belt, hat, etc. The band, which was called the *Magic Ring of Hayim*, performed magic tricks and displayed various aspects of number theory. The Patent Office rejected the claim as obvious in view of the prior art, reasoning that there was no functional relationship between the printed digits and the band supporting the digits.

On appeal, the Federal Circuit reversed. The Court first stated as follows:

Differences between an invention and the prior art cited against it cannot be ignored merely because those differences reside in the content of the printed matter. Under section 103, the board cannot dissect a claim, excise the printed matter from it, and declare the remaining portion of the mutilated claim to be unpatentable. The claim must be read as a whole.²⁴⁶

The Federal Circuit also noted that printed matter may well constitute structural limitations on which patentability can be predi-

²⁴¹*In re Royka*, 490 F.2d 981, 180 USPQ 580 (C.C.P.A. 1974).

²⁴²*Id.*, 180 USPQ at 581.

²⁴³*Id.* at 583.

²⁴⁴*Id.*

²⁴⁵*In re Gulack*, 703 F.2d 1381, 217 USPQ 401 (Fed. Cir. 1983).

²⁴⁶*Id.*, 217 USPQ at 403 (footnotes omitted).